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ABSTRACT

This address explores facets of curricula for preschool children in an attempt to raise issues relevant to curriculum planning. Goals and assumptions of theoretical frameworks for curriculum development are discussed and culminate in the statement of a "Distance from Self" criterion which can be applied to deciding the appropriateness of an activity in any curriculum area. A "Personal Ecology" curriculum emphasizing the child's initiative in interaction with the phenomena that make up the child's own world is described. Spatial relations are viewed as basic and central experiences which should be included in the preschool curriculum. The importance of science, nature study and learning in context is stressed. Closing remarks focus on curiosity and creativity in preschool children. (Author/RH)

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SOME DARK CORNERS IN THE EARLY CHILDHOOD CURRICULUM

An address presented at the
meeting of the
Midwest Association for the
Education of Young Children

Milwaukee, Wisconsin
April 17, 1980

by

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Introduction

Do you remember when we used to talk together about "A Child's World"? Many of us still do, and we know what we mean by it. It seems a good way to conceive of curriculum issues in a conference devoted to the theme "Only Once a Child." There should be some priority-setting based on that unparalleled developmental opportunity. What experiences are really important in a world a child experiences only once? I think these experiences are the ones which should be highlighted and given the priority of our curriculum planning and resources.

How many of you work directly with a group of young children for a whole session every school day? How many of you are what Millie Almy calls "Early Childhood Educators", people who work with, train, and facilitate the work of other adults with young children, as well as working with children now and then yourselves? I'm going to refer to all of us as "Teachers." It is a term that goes comfortably with "curriculum."

Of course you won't find just one definition of "curriculum." I usually think of it as the teacher's plan for children. In the traditions of academics, the teacher has the responsibility for the curriculum. Usually that is the way it works out, in any case. Curriculum planning begins with a set of goals. What do you want to happen for and to children? The theoretical basis and the assumptions which flow from it are also usually there somewhere. Sometimes that <u>is</u> the curriculum. Other curricula have elaborate sets of activities with materials listed which are to be used, daily schedules, and evaluation devices. Some curricula refer to

developmental areas in children; others fit traditional academic subject matter areas such as language arts, science and mathematics, for example. Some curricula are really outlines of the role of the teacher and/or the plan for the physical environment. Discussions of the amount of "structure" usually go along with these plans for the amount and type of adult direction. The relative emphasis placed on the individual child and the group is usually part of a plan, as is the relative accent on indoor or outdoor experiences.

I'm not going to talk about any of these plans. What I propose, by the title "Some Dark Corners in the Early Childhood Curriculum", is to raise some questions which should at least apply, and hopefully, illuminate, your curriculum planning no matter what form it takes. I don't think the differences of form are very significant. I'm going to assume we share a lot of knowledge about children because we have known many children and have studied children and how they develop. We also share a long, powerful heritage of the developmental education of young children. That's why we come to MAEYC--to be among friends. We are here because we work hard to match our classroom planning to the children's needs and interests. If that is true, then we are coming from the same place--an orientation to curriculum of and from a child's world.

Goals and Assumptions

The first "Dark Corner"--and it may not be one for any of you--is that we are sometimes murky about our curriculum framework. Our goals may be fairly clear--but where do these come from, and why these goals? What is the basis of theory? What assumptions

do we make about learning? The point is, we are often challenged. We do occasionally need to explain ourselves. Or maybe we need to provide public relations understandings. Advocates need to understand what they are sponsoring. Teachers need to be articulate about the theoretical base of their programs. This general framework forms the source of daily decision-making on behalf of children. Your own basis of acceptable, sensible theory is where you should look for your priorities. That is how you should start when you decide how to spend your program's money and your precious time with children.

I'm going to go through the goals and assumptions which make the framework of my curriculum thinking right now, and I'll do this briefly, by way of example, to give you a little provocation, and so you'll know where I'm coming from. You will see that these are not fancy, big-worded, heavy statements. Theory should be expressed so everyone connected with your program can understand it. Your own framework for curriculum planning may be quite different from mine. My Enabler Model experiences--some of the most treasured of my life--have taught me that those differences are not insurmountable. The point is, you HAVE a theoretical framework, and the world should know what it is.

I have been privleged in recent years to do a great deal of consulting work. This has put me into many group settings with children and their teachers, especially in Head Start and Title XX day care centers in many communities of the midwest and mountain states. I have found that if you share goals for young children, you can go a long way together.

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-- Slide 1 --

These are my goals for children. I want a program to teach,

support, and enhance every opportunity so that children may be better able to cope with, understand, and enjoy their lives both today, right now, and in the future. Some of you may recognize the diagram from my book, Science with Young Children. The goals and the assumptions I have spelled out there, apply to every aspect of curriculum.

--Slide 2--

I believe, based on a developmental, theoretical framework I explain in the book much more fully, that the most effective sources of early learning experiences for children are:

a. those closest to the child. This means most immediate in time. "It is what is happening now." It means nearest in actual physical proximity. "It is what is happening here." It means most similar in key attributes such as size, form, age, and culture. "It is me. It is mine. It is like me. It is related to me."

b. Of the child's own encounter. The child is better able to learn if he or she finds the experience, discovers it, or chooses it, or creates it.

c. those which serve the child's own needs. This includes the immediate needs in physical, social and psychological realms.

These three assumptions, taken together, form the "Distance from Self" criterion, which can be applied to deciding the appropriateness of an activity in any curriculum area.

--Slide 3--

I think curriculum--the learning experiences and their

sequence and timing--should be planned to expand gradually through time and in some kind of adult-logical sequence, based on knowledge of human development. The planning should begin with each child's own physical, social, intellectual, emotional, and spiritual self. Curriculum content, therefore, would:

a. start with the child's own body in motion, and should emphasize what the child does.

b. should involve planning for each child's multisensory contact with objects and other phenomena. We stress not only vision, hearing, taste, smell, and touch, but also total body sensations such as hefts, tilts, jolts, balance, warmth, cold, pain, pleasure, hunger, thirst, satiation, etc.

c. Experiences can gradually become more remote from the children and their lives as they grow and accumulate experience. Even though educational activities are remote from an older child's reality, they should be based on it.

d. Experiences should continually change. If they are based on developing abilities, expanding interests, and accumulating knowledge in children, they must change.

e. Planning must be done for each individual child. Since individuals grow, learn and conceive thoughts in unique patterns, curriculum must be individually variable, and flexibility should be emphasized.

If these assumptions are followed, and if the related recommendations are incorporated into planning, the first curriculum for each

child would look something like this:

--Slide 4--

You can see the child is the core. The substances which regularly become a part of the child--air, food and water-- come next in curricular line, after the child's person. Soon after that, come clothing, and space, which regularly touch the child, and the caretaking people, and the important objects which make up a young child's everyday experience. The parents and we other adults are the teachers who help children progress from the center outward in all directions. It very rapidly gets more elaborate.

--Slide 5--

This diagram gives us some idea of the variety of topics found in early childhood curricula. I have proposed this concept of curriculum for science--because I think everything that happens has a science aspect. The child's developing knowledge and skills start at the center, and radiate out in all directions and through all kinds of experiences, building greater complexity on top of the developing abilities, in order to arrive at the adult, or at least the formal operations teen years, at which the tradional science subjects are appropriate.

---Slide off, Lights--

The curriculum I propose is called the "Personal Ecology" curriculum. Personal ecology is the individual child interrelating, interweaving, and interacting with the phenomena which make up his or her personal environment--the child's world.

I want to emphasize the direction of flow, that the interests and growth emanate <u>from</u> the child's own self. I think we need to make a clear distinction between this personal ecology/curriculum and the concept of egocentrism, which I also accept and believe, in children's thoughtful function. Egocentrism is, I think, a misunderstood concept. Many adults seem to have a negative, devaluing, response: "These little children are selfish," and see it as a major educational aim, a cause even, to bring children quickly out of such a misquided and uncharitable condition. I don't think that brings much understanding to children. Children will go as far as their scope allows at any given time in their development. It is within that scope we should be working. As you teach young children, you see glimpses of sympathy, empathy, and a great deal of patience about communication on their parts. You see them trying hard. The curriculum based on, and using, a child's world should be as actively outreaching into that world as are the children themselves.

One further point about curriculum planning in general, and I'll label it as a bias, so you are sure to recognize it. I worry about carefully specified behavioral objectives for young children. Objectives in education are only functional if they <u>are</u> very specific and stated in such a way that a single outcome in a child's behavior is reasonable and evaluatable. But the significant growths in young children which are the business of early childhood education, are nearly all BEGINNINGS. It is hard to quantify a beginning. Almost nothing of any significance is finished when a child leaves the early childhood classroom to enter an elementary school setting. Almost no skill is fully operable, almost no body of information is organized, almost no thought patterns are mature. What we do in

all of the really important learning areas, the skills, the thought processes, the concepts, is to make starts.

By all means, state clear, concise objectives and measure the outcomes, if that helps you know where you are or where a child is, or if it meets the needs of your institution. But don't let it sidetrack you from major developmental goals. Recently, a friend of mine, who has a four-year-old enrolled in a local nursery school, told me this story. It seems she felt her son should participate in the giving aspect of a holiday. So she proposed that they get his nursery school teacher a gift.

"What do you suppose she'd like?" asked the mother.

"I dunno," said the son.

"Well, what is she interested in?" persisted the mother.

"I dunno," said the son.

"Think a minute," said the mother. "What is the thing she likes <u>the best</u>?"

"Oh!" said the enlightened four-year-old. "The best thing she likes is a blue triangle."

Do you see what I mean? I worry when I think we might be distracted by the narrowness of specific objectives. Our central purposes have to do with the growth of human beings, children. Beginnings may be hard to evaluate, but one doesn't get very far without them. I'd like us teachers to be able to measure ourselves by the awesome and powerfully important things we do for children--we help them make beginnings and we help them grow.

<u>Spatial Relations</u>

There is an area of curriculum which is so close to us that maybe we can easily forget it is there. I'm speaking of spatial

relations. Closest to the child physically is space, remember. Most of us center planning attention of various aspects of gross and fine motor development. Bodies in motion is one of the hallmarks of our early childhood education work. We're famous for it and let's keep it up. I wanted to point out that these body development activities are the same ones through which children gain the beginnings of their concept about space and the phenomena of space, such as wind, for example, and how objects and space relate. When you move your arm, you are moving it through a substance. air, which fills the space we know best which is not filled be anything else. By moving your arm, you have created a new relationship with space, with your environment.

I have written at length about what I call "playground physics", for example, proposing that our understandings of physical forces and energy, etc., probably originates with our own bodies. Constance Kamii, and Lucinda Lee-Katz who will be speaking here later, have written on many of these body experiences in their excellent article on preschool physics. Ronald Good, in a book I find very valuable, called How Children Learn Science, points to these learnings, too. (And in case the title of his book turns you off, let me quote to you his dedication: "To butterflies, young children, and others whose freedom is their life.", p.iv.)

Ronald Good gives a review of the Piaget and Inhelder findings that young children develop concepts related to topological space long before they develop the ideas we adults remember as Euclidean spatial or geometry, concepts. Euclidean concepts are the ideas of

angles, lengths, sides, distances between two points, area and volume. Also included are anything beyond form perception about two-dimensional shapes--the old blue triangle again. In topology, even very young children can deal with ideas concerning proximity or closeness, with separation in space, with ordering in space as in putting things in a circle, and with ideas about enclosures, boundaries and regions, openings and continuity in space. The early and important shapes experiences is running your fingers around the edges to establish the bounds, and feeling over the surface area. Maria Montessori knew the importance of topological experiences. But as I observe early childhood activities periods dealing with shapes, this is a step I see being left out when the curriculum objective states that children will "Learn to identify basic shapes." Children are being taught to name a circle before they know the feel of a button.

Children are interested in, and deal every day with, topology experiences which define a point of reference in space--usually themselves, or their hands or their eyes, for example. Topology also includes such interesting stuff as holes in the ground and tunnels which connect them and secret places into which only I can fit. Sound familiar? We are speaking of concepts which form a basis for mathematics and science and engineering and a host of other mature endeavors. It appears, from current literature, that children do indeed start with their own bodies in space and learn through movement in order to establish mathematical concepts. They then progress to more sophisticated spatial thinking--the beninnings of projective geometry, concepts, with are based on the laterality within and the directionality out from one's body into space. Then we see some real notions of the meaning of "left"

and "right", "in front of" or "behind", and of mirror images, distance, and perspective--what a table setting looks like from the point of view of the person across from you. It seems then that only much later do Euclidean ideas really develop, those of two-dimensional closed systems, concepts of parallel lines, and most real understandings related to shapes and their properties.

For curriculum planning, what does this mean? It means we have an additional rationale, if we ever needed it, for the sand pile and the hiding hole. It means we may go back and reread Frederich Froebel if we need to, to reawaken our sense of the importance of balls as pieces of equipment. It means that walking along a fence or around a storage shed is a great educational experience, and more important than naming a rectangle. It should take priority on your curriculum attention and time. It means that children should move in space with and without music, should follow paths, walk up hills, trace the curbs along streets, and balance along concrete walls. They should contemplate doors and gates. They should enclose a small area with string and see who, or what fits inside. They should move furniture and play with wheel toys. Building a house in the yard with autumn leaves or gravel in little ridges denoting rooms is a fantastic topological advance. It is virtually a beginning in map-making and geography studies.

A curriculum emphasis on spatial relations means that children need space and time to build with blocks. I remember the days when, if parents were asked why they sent a child to nursery school, some would reply, "--Because I can't afford a set of blocks like that at home." Recently, I have visited early childhood centers where beautiful sets of unit blocks were available and children were not using them. Why? In one day care center, after noting this

on repeated visits, I started the staff along into a discussion. It took some figuring out among us, but several reasons emerged. For one thing, blocks were only allowed during "free play", which was a relatively short period early in the day, at a time when some children were still sleepy, or were at least not "warmed up yet." There were other, competing activities, other things which were only allowed during this period of time. The time period was short, perhaps too short for an activity as complex and involving as block play. And, finally, the teachers were able to identify another reason. They saw themselves as exerting too much concerned pressure about clean-up, that is with the expectation that the children would do it all. Any child whose topological concepts are developing well can see that putting away a heap of blocks is as overwhelming task. So blocks didn't seem worth it! Blocks need space, time, and your permission and help with clean-up. If you have any doubt that the activity is worth your focus, I want to steer you to the NAEYC publication called The Block Book.

You know that young children do not understand concepts of time and space combined into ideas about distance ~~and~~ duration and speed. But the beginnings are there and are important, as this kindergarten incident illustrates: Lori and May were in the houseplay area. Lori packed some crayoned drawings into a purse, and said: "I'll take the 'portant papers and go to work now." She left the area, found a large hollow block, sat on it, and said rhythmically, "Drive, drive, drive, drive. Now I'm at work." The beginnings are indeed there, and need the time and support of your carefully planned environments so they can happen.

Another spatial relations concept which is formed on the basis of a topological learning is one I've mentioned already. Ordering is an organization of people or objects in space. For example, the order of left to right across the space, drop down, space back to the left and proceed to the right again. It's called reading, in this culture. Very specific, very arbitrary, and very spatial in its foundation. Ordering in space also includes the beginnings, for young children, of the understandings of arrays and arrangements. Later it will include the beautiful complexities of choreography and the staging of a puppet play. Now it means knowing how to set up a game of Ring-Around-the-Rosie.

Another space concept is proximity and juxtaposition or adjacency--what is next to the point of reference? The chairs need to be brought to the table and pushed under it. The towel racks are near the sinks--why? "Join hands with your neighbor". Who is your "neighbor"? That is a topoligical concept before it is a social one.

If we stop to think about it, all environmental understandings incorporate basic space relations, whether you and the children are rearranging the classroom and figuring out where the shelves will fit, or whether you are watching the drift of smoke from a smokestack, or whether you are carefully lowering a water dish into a box of newly hatched chickens.

Lydia Gerhardt wrote a book a few years ago, based on a great deal of research into the idea of the relation of moving and knowing. I recommend it. I also want to call your attention to a new and very thought-provoking book, edited by Kaoru Yamamoto, called Children in Time and Space. I guarentee that after reading these, you

will never dismiss motor development curriculum as "muscle-building" again. The foundations for later learning are spatial relations. It would be hard to overemphasize the curriculum significance of experiences in space. They are close to the core, and form the bulwark of all learning, doing and thinking.

Science Education

If you thought you would get out of here without hearing any more from me about science, better leave now. As I read the program for this conference, I thought it was delightful because there were so many workshops on science and nature study topics. You have seen that I can very comfortably base a whole curriculum on it; I think it is a primary focus for early childhood education. Everything in a child's world has a science aspect. If the offerings of this conference are an indication, we may be reversing the trend. I hope so. But the trend has been documented--and science and nature education is in trouble.

About a year and a half ago, Mary Harbeck, who is the science coordinator for the Washington, D.C. public schools, and Phyllis Marcuccio, editor of Science and Children, the elementary school journal of the National Science Teachers Association, wrote an article drawing attention to this trend. They suggested declining enrollments, inflated costs, and budget cuts were partly responsible. But, and I quote:

> But an even more pressing reason for this decline may be the shortsighted way the 'back-to-basics' movement is being interpreted and implemented at the elementary school level.
>
> (p. 94)

Science may be losing out its share of classroom time, is certainly being left out of financial priorities, and is being devalued by teachers and parents who have been asked to define and rank school priorities. The science that is hardest hit is, of course, the process-oriented curricula. Those are the ones which emphasize learning scientific method through investigation and discovery, even though we would not have science without these processes.

Harbeck and Marcuccio point out that science and scientific processes have been a central focus for children for centuries, and they cite especially those whom we early childhood people hold dear in our heritage--Comenius, Rousseau, Pestalozzi, and Dewey. The authors give a brief overview of innovative science curricula of the 1960s, funded by the National Science Foundation, as part of the national response to the Soviet Union's launching of Sputnik in 1957. For awhile, it looked as if activity-centered science (which is all real science) would become a part of every child's education. But it is not happening. Science does not begin with "R".

The proportion of schools which have used any of the innovative, hands-on, curricula has never reached one-third, although evaluations of these programs have been impressive. With wide choices of these child-appropriate, exciting curricula and materials available, a 1979 review of the National Science Foundation literature in science education shows that about 80% of the primary teachers and 90% of the intermediate grade teachers base their science curricula on a single textbook. National student achievement scores on typical science questions have been going down. The

educational deemphasis on science seems appalling in a nation which looks to its scientists to cure its most feared diseases and to find the solutions to its problems of curtailment of comfort, energy shortages, and threatened life-style.

Teachers of young school children feel inadequate. To quote Harbeck and Marcuccio again:

> Many classroom teachers continue to feel insecure in their backgrounds and resist teaching science. Involvement appears to be the best remedy, for as teachers become familiar with the freedom of investigating phenomena instead of teaching 'proven facts', elementary science classrooms become increasingly comfortable and success-oriented.
>
> (p.98)

It seems like it ought to be worth whatever it takes to make that happen. Even those of you who work with preschool children can find this comfort for yourselves in not having to know the right answers. A short time ago, in preparation for doing some science workshops, I asked several scientists, both physical and biological fields, if they thought they could probably answer any question a four-year-old child might ask. Their response was unanimous:"No. No way!" That might help you to know that facilatating children to make good beginnings in science and nature study does not require you to know the answers.

You may notice I have repeatedly said "science and nature study." This is and ought to be redundant. All science begins with nature study, as do all scientists. But nature study is coming in for its share of hard knocks, and I wanted to alert you, hence the emphasis. Recently, an esteemed colleague criticized early childhood science and its nature focus as, and these are her

words, "idyllic, sentimental, and romanticized." Her point was that since most young children were in urban settings, their experiences should be technological. It is a narrow point of view which overlooks a basic fact. Children and other people are natural beings. So are the materials which support life, such as food and water, and the materials of which machines and buildings are made. Technology is based on science. Each of us, as biological creatures, are part of an ecosystem. It is the surrounding environment with which we interact. The effects of that relationship are reciprocal: the environmental factors effect us and we effect them. As a matter of fact, all of you who care for children, who devote yourselves to providing the conditions for optimal growth are expressing an ecological environmental concern of a very special and wonderful kind. Human development is based on biological development as one key component. It is an integral part of all early childhood work to arrange the environment to support development.

I would be enormously depressed if my children and grandchildren and their peers were to be limited all their lives by the limitations of my knowledge. I would even feel that way about all of the collective knowledge of all of us assembled here today, although it must be immense. That is the way I feel about the limitations technology places on children. The more person-made is the environment, the more a child may be limited to what other people already know, have thought, and have invented. It is not conducive to creative thought. Nature is still where the wonders are.

Where young children are limited in their access to nature, we have to work harder to provide it and highlight it. We should be giving it high priority, instead of giving in to it. City children need help to study nature and natural relationships. You start with what you have: day and night, wind and weather, seasons, insects, rodents, landscaping, rainwater. Pete Seeger sings it better than I, but "God bless the grass that grows through the cracks." If nature encounters don't come naturally, we need to write them into our curriculum plans in big, bold letters. If necessary, children must be taken to places of special interest, such as science,museums and botanical gardens--not once in a lifetime, but often enough to learn to live with other species. Children who live in the city should be taken to the country, just as country children should visit the city--it is a world they all share and are growing into the adulthood where they must share responsibility for each other's environmental well being. More of your budget should go for nature study; your advocates should be turned on [illegible] to the need to facilitate nature study. The light needs to shine brightly into that science corner. A child in tune with nature is a child in tune with herself. A child who likes nature and appreciates natural processes is a child who appreciates and likes himself.

While we are there, let me mention a related point. Young children need to experience things <u>in</u> <u>context</u>. They need to see the leaf on the branch and the branch on the tree and the tree rooted in the soil. Children need to experience a whole thing in its right place--that's education. We commonly bring natural objects

into our classrooms for children to see, feel, and come to know. We display rocks, pine cones, feathers and ferns. And we should. It is part of the good job we do every day for children. But we shouldn't stop there. We need to find ways to help children begin to sense the natural context of objects. We need to plan field trips, show pictures, tell and read stories, set up miniture ecosystems such as terraria and fishtanks, ant farms and worm houses, or whatever it takes to enhance the understanding of the thing and its relation to its natural environment.

There is another kind of context, besides the physical-spatial one of the environment. There is the context of time, in which natural changes, sequences and cycles take place. To teach a natural cycle requires great patience, careful planning, and a very mature future-orientation on the part of an adult. The seeds lying on the table are interesting, but are they meaningful? To most children nowadays, seeds come from packages, and packages come from the store. The package has a picture on it of a very desirable product, a vegetable or flower, usually. The goal, or end point, is to consume the product. Suppose we are planting lettuce. We bring the package, the children look at the picture. If we do it well, each child has many opportunities to examine the seeds, has a chance to plant some, and to water the plot, observe the growth, and, finally, eat the lettuce. Good. We are teaching sources of our food, and the interplay of conditions needed to grow it. But how many times do we deliberately and planfully nuture some of the lettuce into blossoming and going to seed? Do we harvest the seeds, save them, dry them, and later plant them to complete the cycle? How often do we do these important learning experiences with plants which do not produce a product we immediately desire to consume, such as

a milkweed or a foxtail grass? Yet these plants are just as important, in a natural sense, I think, although food comes first and is closer to the child's self, that other plant-person relationships can be explored with young children.

Early childhood people need to be very aware of the need for children to experience a WHOLE, a thing-in-its-place, or a cycle which is fulfilled and renewed. It is a style of curriculum planning which differs greatly from the bits and snatches of isolated experience which comes from the "Let me see. What shall we do today?" approach. It is also in contrast to the thematic "It is spring, so we'll plant seeds. It is part of our spring unit." approach. Planting and harvesting span seasons, do not fit neatly into weekly lesson themes. We plant seeds because we want to help children learn about growth cycles, the ongoing and self-perpetuating spirals of continuous life. What more significant theme for children could we find than that? I'm suggesting that it is worth our while to think carefully about the meaning of an experience. If we decide to teach it, then let's teach it fully, in context, and through its sequence as often as we can, especially for children who may otherwise miss the experience altogether

Curiosity and Creativity

Finally, I want to make some curriculum comments on the two "Big C's"--Curiosity and Creativity. Recently, I was being given a tour of some appealing early childhood facilities by the director. As we entered one room, a shiney-eyed, somewhat gangly four-year-old boy said to the director, "I'm being good, teacher, see? I'm being good." What do you think he was doing? You are right. He was sitting quietly in a circle of quiet children with

his hands in his lap.

What does "being good," mean to the children who participate in your program? Does your curriculum teach children a self-concept of goodness and value because of curiosity and creativity or does being "good" mean being passive?

Curiosity and creativity go together, although neither necessarily goes with high scores on intelligence tests. These adventurous, active children are also usually secure, flexible, persistent in seeking information, and seem to have strong self concepts. Let's look at curiosity first.

Curiosity. Curiosity is defined in many ways, but we know a curious child when we see one, don't we? Curiosity is a characteristic a motivating force, and a set of observable behaviors. Curious children scan an area to "see what they can get into." They seek new, novel, exciting experiences. And when they find them, they like them. They focus attention on, for example, that box of newly hatched chickens. They move toward it, crowding around, demanding their space and their viewpoint to see. They want to touch and smell, and feel the warmth, too. They manipulate and explore with all their senses. They also are the children who need to know. They question; they seek information. Where did the baby chickens come from? Who brought them? How did they get into the box? Who put them there? How old are they? What do they eat? Where's their mommies? Why is the water there?--and so on. Curiosity is a perceptual, motor, and intellectual function, and a very important one.

What are the curriculum considerations? The first decision is whether your goal is to have more of curiosity / or less of it. If it's less, I can't help you beyond the considerations of safety. But there are some ways to promote positive curiosity goals.

(1) You have to give your permission for investigation and adventure. You do this by providing security and comfort, by encouraging children to do things and ask questions, and by setting up an environment that says "Explore me." You have to praise inquiry and reward discovery.

(2) You should provide enough time for a <u>child's</u> cycle of investigative activity to take place: for a child to approach, manipulate enough, inquire in his/her own way, and play. You have to decide, if the child doesn't, whether the time should include enough opportunities to become bored or not. It is a crucial question, and depends on whether you want to stimulate curiosity or satisfy it. But this is a curriculum decision, and it should be based on your educational goals for children, and not on the fact that it is cleanup time.

(3) You have to plan activities which engender curiosity behavior. These should be novel--suprising, not <u>quite</u> fitting with what the child already knows, therefore somewhat incongruous and challenging. The box of baby chicks is no problem. Any special event finds curious children on the front row. These are the times for you to look around and see who, of the group, is NOT interested, and see what you can do for those children. Animal experiences are very special in the lives of children, but an old alarm clock to take apart may appeal also, and

many of the other "junk" items you know how to use so well with children. Curiosity is sometimes enhanced by children working together in twos and threes--truly, what one can't think up the other one can--and isn't that what we want? Curious behavior seems to be given a boost by the one-to-one attention from an adult who can listen and share the inquiry with excitement, but not provide the answers.

(4) Be a curious, lively, adventurous person yourself. I haven't said much about modeling, but it is powerful. What children see you do effects their behavior; they are inclined to do likewise.

(5) Examine the messages you send when you read a "Curious George" or other stories. Some of the books carry a double message, or actually warn children against trying out their ideas. Adults through the ages have needed to control the exploratory behavior of children. We still have many ways of telling children that inquisitiveness is bad, that children should be seen and not heard, that curiosity killed the cat. Your curriculum, in order to encourage and stimulate curiosity, will have an uphill battle against these cultural messages. If you really want to teach a self-concept with which a child says, "I am good because I am curious," you have your work cut out for you--and beautiful work it is.

Creativity. To the extent we can separate creativity, let's think about it a minute. It seemed to me a good way to end our considerations of curriculum together, because early childhood teachers, I think, are aware of and provide for each child's many forms of creative expression better than any other group I know.

We know what we're doing and we're good at it. This is not a "dark corner."

My guess would have to be that we all share a deep concern, however, about what may be happening to creativity. We worry about the demanding rigors of school systems, and about young children marching in line to the bathroom. We worry about the squandering of their productive and creative potential on passive televiewing. Sometimes I hear worries about the ease, or neglect, of the standard of living. Either condition may leave children few challenges, only rare problems to solve, almost no discrepancies, and very little real work to do. I have shared with you my concerns about children's opportunities to learn spatial relations, and to encounter nature. These are creativity worries, too, in part. Science is a creative activity. I believe children develop creative ways of doing, of problem-solving, and of scientific inquiry through their interrelating with many aspects of the natural phenomenal and interpersonal (which is also natural) world.

It seems to me that creative production will and can go beyond a young child's naive discovery, expression and invention--but is based on it. It is a special kind of thinking and doing. Alexander Thomas and Stella Chess give support to this point in a new book which has just come out, detailing the theme of task mastery and social competence as goals of behavior and organizers of personal development. But they propose that a truly creative individual may be the exception:

> Creativity is qualitatively different from other cognitive, affective, and social human activities. It may well involve goal-directed capacities and functions that cannot be fully encompassed within the task mastery and social competence model. 26 (p. 53)

When you plan creative opportunities into every corner of your curriculum, remember this is great work. You are doing work for a child's today and a child's tomorrow.

Because social goals for children are fashionable and contemporary does not necessarily mean they are enduring. Any look at a discussion of the history of education will illustrate that. I see early childhood teachers feeling uncomfortable as they expend enormous energies on narrow pre-academic goals, as if we knew what skills will make for successes in a 21st century adulthood.

As a final word, let me repeat. We early childhood people know how to shape a fine developmental curriculum for young children--a curriculum full of moving and doing, natural beauty, joy in learning, and a self concept in children which defines goodness and value as creative production and persistent curiosity. Let's keep lighting up the corners every day , the way we know so well how to do, for every child.

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